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The promise and perils of water reforms: Perspectives from Northern Ghana

Summary

The Ghanaian government, while aiming at the privatisation of the country's drinking water resources, initiated a wide reaching reform of the water sector in 1996. The country's water resources are now officially under the control of the Water Resources Commission (WRC), which propagates integrated water resource management (IWRM), and has the task of managing the country's water resources efficiently, sustainably and equitably. Taking an irrigation scheme in Northern Ghana as an example, this article shows formal and informal constraints on the implementation of the water reform at the local level. Given the local political climate of legal pluralism and weak governance, the question arises as to how the WRC, with slender resources, is to implement resource management locally. As the WRC has also failed to influence important water sector decisions on the national level, there is the danger that powerful local and national interest groups use the reforms to legitimize their vested interest, thereby excluding others and ignoring environmental concerns.

Keywords

Water reform, state and local government, land ownership and tenure, water, irrigation, Ghana

The Ghanaian government enacted a new water law (Water Resources Commission Act, Act 522 of 1996) under considerable donor-pressure to privatise the urban water supply systems. This act laid the foundation for the creation of a new water bureaucracy and the promotion of integrated water resource management (IWRM) in Ghana (Government of Ghana 1996). Existing water rights were abolished, and a basis for the allocation and taxation of water use rights was created (Water Use Regulations, L.I 1692, 2001, Government of Ghana 2001). However, lack of political support and funds hampered the widespread implementation of the new legislation. The new water bureaucracy is only slowly taking control of water resource management in Ghana.

This article analyses the difficulties and limitations the implementation of the water reforms, faces. At the national level, the WRC does not have the power to control the use of water resources if important economic and political interests are at stake. It fails to influence crucial water sector decisions, for instance, in the mining areas, and regarding the construction of large dams, but is instead used by powerful actors to get water use permits to legitimise controversial claims on water resources despite serious ecological and social concerns. However, this article will focus on prospects for the local implementation of the new legislation. At the local level, the WRC, in view of its very limited resources, largely depends on the existing local government structures, such as the District Assemblies (DAs), for implementation. But local governance is affected by multiple foci of power, e.g. district administration, politicians, (neo-)traditional authorities, local 'big men', as well as by legal pluralism. In addition it is often characterised by problematic relationships between the local population and government officials. Results from anthropological research in the Tono irrigation project in the Upper East Region of Northern Ghana will serve as an example to show that official legislation hardly becomes hegemonic under these conditions. It is rather re-shaped and integrated into the complex framework of plural local institutions and interests, or simply ignored. Traditional rules, social networks, political patronage and outright corruption continue to influence the ways in which resources are allocated and managed, often to the benefit of wealthier, better connected and more powerful actors.

International legal prescriptions and the failure of the local implementation of water reforms in Africa

In the past decades, various African countries including Ghana have been undergoing water reform processes. In rural areas, reform processes focused on the involvement of beneficiaries in the financing, operation and maintenance of water supply and irrigation infrastructure (Deverill et al. 2002, for drinking water supplies/Vermillion 1997, for irrigation). In urban areas, policies often instigated the privatisation of urban water supply systems (Bayliss and Hall 2000). These reforms were often supported (if not initiated) by donor agencies and were part of Structural Adjustment Programmes (SAPs) that cut state subsidies for the water sector. The experiences with the rural reform programmes have been mixed (Bruns and Meinzen-Dick 2000/Vermillion 1997), irrigation reform programmes were contested (Mollinga and Bolding 2004), and the privatisation of urban water supplies was hotly debated (Balanyá et al. 2005/Estache et al. 2005). Apart from sector reforms, the governments in many African countries have enacted more far-reaching water laws. These water laws are designed to discontinue existing water

rights, to vest control of all the countries' water resources in the state, and to establish new management frameworks for water resources. The reforms are based on the internationally promoted paradigm of Integrated Water Resources Management (IWRM)¹. The legal implementation of IWRM, like that of other 'global legal prescriptions' (Dezalay and Garth 2002: 1-2), is enforced through international organisations, loan conditionality, expert consultations, and economic as well as political pressure.

However, the proponents of reforms aiming at IWRM seem to have an unrealistic and simplistic perception of the process of legal implementation (cf. Meyer, et al 1997; 1977; Benda-Beckmann 1989: 129/Benda-Beckmann et al. 1996 for the water sector). They overrate the transformative power of legal impositions as well as the political will of governments to enforce their implementation. In addition, they tend to neglect the local context of implementation. Processes of legal implementation are embedded in highly specific cultural, socio-economic, institutional and political environments and have to be analysed from this perspective.

For many parts of (West-) Africa it has been shown that the local state is characterised by incomplete decentralisation and democratisation. This makes local politics non-transparent and open to political patronage and the capture of strategic resources by elites (Guha-Khasnobis et al 2007; Chabal/Daloz 2006; Bierschenk 1997/Mamdani 1996/Rösel and Trotha 1996/Spittler 1981). The clientelistic nature of politics (Bayart 1993), as well as the alliances of politicians and administrators with 'traditional' authorities and local strongmen, has created powerful local interest groups whose interests cannot be easily disregarded even if legal requirements would demand it (Bierschenk and Sardan, 1999: 62-63/Migdal 1988: 247 ff). The implementation of legislation is also complicated by legal pluralism and struggles of local authorities for power and resources (Moore 1978: 1 ff/von Benda-Beckmann 1981). Therefore, to gain access to vital natural resources, actors do not necessarily rely on legal frameworks but rather on social relations and networks (Berry 1993). In such settings, the local outcomes of reforms are difficult to predict. Experience from the implementation of resource reforms in Ghana (Amanor 1999 for forests/Kasanga 2001 for land) and elsewhere (Derman

1 IWRM has, especially within the 'development industry', become a 'sanctioned discourse' (Allan 2003: 21-22). IWRM tries to balance liberal economic thinking and environmental concerns with the equitable allocation and management of water resources within river basins (GWP 2000). But it has been objected that IWRM is an inherently western concept that does not necessarily reflect the needs of *the South* (Allan 2003: 23-24), that water should not be regarded an economic good (Mehta 2000), that scientific knowledge and human management capacities are insufficient to allow for real IWRM (Kluge 2005: 37-38), and that it remains unclear how competing economic, environmental and socio-political objectives are going to be prioritised and negotiated (Laube 2005: 233).

and Hellum 2002/Sithole 2000 for water reforms; Lund 1998/Manji 2001 for land reforms) have shown that the ineffective implementation of well-meant reforms in the context of conflicting interests and weak local governance structures might easily compromise the underlying objectives of the new resource regimes.

Preparing for private investment: The Ghanaian water reform process

Since the 1980s, Ghanaian governments have pushed forward water sector reforms. Early reforms targeted the involvement of communities in irrigation management, but focussed mainly on the drinking water sector. Many urban water supply systems were in a poor state and a large percentage of both the urban and rural population were lacking access to improved water supplies (MoWH 2002). However, despite considerable investment by the World Bank and other donors, the demand for coverage and the efficiency of urban water supply systems remained low (MoWH 2002). Later on, the World Bank used the conditions of loans to put pressure on the Ghanaian government to introduce cost recovery and privatisation approaches in the water supply sector (ISODEC 2002: 45-46). These reform efforts were not only followed by drastic changes in water supply policies², but also led to overall water reforms.

The need for a single supervisory body for the water sector had been discussed in Ghana as early as 1987 (MoWH 1999: 11). However, it was the plan to privatise urban water supplies that gave the impetus for the creation of the Water Resources Commission in 1996 (Government of Ghana 1996). International consultants had made clear that the existing legal framework did not provide the security of investment that potential international investors expected (MoWH 1998: 48 / MoWH 1999: 9). While the water reforms can be criticised for having a rather instrumental function, Ghana certainly displays some demand for water resource management. While Ghana is well endowed with water resources, seasonal shortages and annual variations are problematic. In addition, the country's annual consumptive water demand is projected to almost multiply fivefold by 2020 (MoWH 1998: 33-34). Droughts and increasing demand lead to sectoral competition. This is especially so, because the Akosombo Dam, where 80% of Ghana's electricity is generated, is situated downstream in the Volta River Basin. Droughts have already led to low water levels in the dam that caused severe power cuts in 1997/1998 and 2006/2007. These power cuts have created political tensions and raised sus-

2 To create favourable conditions for the privatisation of urban water supplies, water prices were drastically increased, and the GWCL was released from the responsibility for the non-profitable rural and small town water supply sector (ISODEC 2002: 60).

pictions about the increase of up-stream water demand and land use changes, for instance for irrigation (Adu-Asare 2007).

National water legislation was introduced in 1906, when the 1903 River Ordinance of the British colonial government was enacted. The ordinance remained valid until 1996 but was superseded by several enactments which related to specific water uses (e.g. for domestic purposes, agricultural use, mining, etc.) (Laube and van de Giesen 2005 / WRC 1999: 4). However, customary laws as well as riparian water rights³ granted under common law were officially recognised and continued to reign *de facto* over water use and management practices throughout the country.

The new law has changed the way in which water rights are legally treated in Ghana. It vests the ownership of all the country's water resources in the President and "abolishes the pre-1996 customary regime for ownership of water which resided in stools, communities, families and individuals" (Sarpong 2005: 6). Prior to the promulgation of the new legislation water resources had not been subjected to state ownership (Opoku-Agyemang 2005: 27-3). However, individual access to water resources for domestic uses and small-scale businesses and subsistence agriculture has been granted (Government of Ghana 2001: 4-5).

The WRC commits/pledges itself to the paradigm of IWRM, at least rhetorically, and the aim/principle that water resource management should be sustainable, equitable, participative, gender sensitive and, last but not least, economically efficient. However, it remains unclear in how far the government really supports the WRC and its programme. The fact that the responsible Ministry for Works and Housing, despite substantial financial donor support, did not provide any budget for the WRC in 1997 and 1998 (Nii Consult 1999: 42) and continues to allocate only limited funds to the WRC seems to indicate that political support for the water sector reform is limited.

However, the WRC started its work in May 1998. In order to develop approaches for the local implementation of IWRM, the WRC has started three implementation pilot projects in the Densu (2002), White Volta (2004) and Ankobra (2007) river basins. Central to the effort to monitor and coordinate the water sector is the local implementation of the water use regulations. Through a registration and permission process, all the country's raw water abstractions, including those for domestic and agricultural purposes beneath a certain threshold, are to be registered. Uses that exceed basic water abstraction need permission and are to be billed. While abstraction tariffs are rather low, the fees for registration and permission are high (Government of Ghana

3 'Under the common law rules on riparian rights, an owner of land abutting on water, known as the riparian owner, is entitled to the access to and regress from the water, whether it is a tidal or non-tidal river, lake etc. provided his land is in actual daily contact with the water, either laterally or vertically' (Opoku-Agyemang 2005: 27-4).

2001). The registration process has begun and major water users have started to obtain water use permits. However, the large-scale implementation is still pending (Laube and van de Giesen 2005).

The WRC faces the problem of having only limited influence on decisions of high political importance. An example is the construction of the Bui dam, which is the major hydraulic infrastructure project currently undertaken in Ghana. Since August 2007 (Okoampa-Ahoofe 2007: 1), a dam and 400 MW power plant are being constructed at the Black Volta River despite serious ecological and social concerns (WRM 2006). The planning process had been ongoing for decades until the construction of the dam was finally decided in 2005 (Graphic Ghana 2005). However, it was only in 2007, after decisions over the location, type and the design of the dam had been taken, that the government approached the WRC to grant a permit for the construction of the dam.

Similarly, the influence of the WRC on equity and ecology in the mining areas of the country seems to be rather minute. Mining companies have been given water use permits by the WRC and pay water use tariffs. However, open-pit-mining, as practised in many parts of Ghana, has a large impact on the hydrology and water quality of the areas concerned and negatively affects the livelihood and health of local communities. The pollution of surface- and groundwater resources with cyanide and the drying-up of rivers and aquifers have created several conflicts between mining companies and the population affected. However, despite its responsibility to mitigate water resource conflicts, the WRC has been conspicuously absent in mining areas. Only in 2007, did it begin to establish an office in the Ankobra Basin, one of the most affected areas; despite this the WRC still seems to keep a low profile and to avoid getting involved in the politics of mining. This became obvious when during the constitution of the Ankobra River Commission the seat for NGOs was not given to the well-known NGO WACAM, which has quite successfully confronted mining companies on behalf of the affected communities. Instead, the seat was given to a small NGO that focuses on reforestation (personal communication with NGO representatives in November 2007).

These examples show, how the new legal requirements that have been created through the water reforms are brushed away in areas of political and economic importance and how the WRC, in order to avoid getting in the way of politicians and powerful interest groups, fails to live up to its mandate and responsibilities.

How the WRC, despite the hard effort and serious intentions of its staff, is going to organise the local implementation of the Ghanaian water reforms is also problematic. It lacks the mandate, as well as the financial and human capacities, to engage in the local implementation of the water use regulations. Therefore, the monitoring and allocation of water use rights are supposed to be undertaken by local governments with the help of traditional au-

thorities (Opoku-Agyemang 2005: 27-4). However, the DAs are not well-equipped for this task (either). They are already overburdened with responsibilities and suffer from a lack of funding as well as qualified staff (Asibuo 2000 / UNEP 2001). Furthermore, local governance is often ridden by corruption and political patronage, as downward accountability and public participation are lacking (Crawford 2004: 25). In order to show how the implementation of official regulations works out in a concrete local political arena, and how diverging interests and agendas are locally negotiated, we shall take a look at the example of the Tono irrigation project.

Natural resources management within the Tono irrigation project

Research objectives and methods

The following summarises results from my own anthropological research undertaken in the Tono irrigation project in the Kassena Nankana District of the Upper East Region in Ghana⁴. The research objective has been to understand how local resource management takes place, which institutions and actors are involved, and how the institutional framework influences the sustainability as well as the social and economic outcomes of the existing local resource regimes. As the project is rather large and involves nine communities and about 4,000 small-scale and commercial farmers, research focussed on a particular community and its farming zones. Qualitative research methods based on participant observation were used because many local actors reject rules and obscure their practices when confronted with more formal research approaches. They feel uneasy when faced with questionnaires and recorders. I spent about fourteen months in the district capital Navrongo, in the research community, and in the Tono irrigation scheme. In order to develop a better rapport with local actors, to gain impressions of economic strategies, patterns of social differentiation, and the institutions and negotiations that are involved in getting access to water and land, I engaged in farming myself. Farming offered many opportunities to discuss with different local actors, such as farm labourers, small-scale farmers, commercial farmers, extension officers, water engineers and members of the project management and chiefs. Information was obtained through informal communication and semi-structured interviews as well as through observations during a number of meetings dealing with issues of land and water management and allocation. I also conducted formal and semi-structured interviews in order to develop a picture of the institutional development in the irrigation scheme and to obtain quantitative data on small-scale farmer's economic strategies.

4 The research, conducted in several stays between 2001 and 2005, was part of the GLOWA-Volta research project of the Center for Development Research (ZEF) of the University of Bonn, funded by the German Federal Ministry for Education and Research.

Irrigation in the Kassena Nankana District of the Upper East Region

In the rural settlements of the Kassena Nankana District, almost all households depend largely on agriculture for their livelihood. Families engage in the rain-fed cultivation of millet, guinea corn, ground nuts, beans and a variety of local vegetables. Cultivation takes place on farms surrounding the compounds, on family land located at some distance from the homesteads, and on bush farms even farther away. Land is allocated by *tindanas*.⁵ *Tindanas* are held in high regard, since they are able to communicate with earth and water deities through the medium of their ancestors. They perform regular rituals to ensure purification of land and water resources, for the well being of the crops, and for the fertility of the land, the livestock and the human population of their respective territory. Land distributed by the *tindanas* may become non-revertible family property after years of continuous cultivation or can revert to the *tindanas*, as it is the case with periodically used bush farms.

As the population density in the Southern part of the Kassena Nankana District was very low, up to the 1960s, and land was available in abundance, soil fertility could be sustained through a fallow system. As the population grew, the fallow system was abandoned. Since farms are continuously used, soils are degrading and yields are declining (Blench 1999: 25-26). Local agriculture has long been exposed to climatic risk. Rainfall patterns are very unreliable with an average of 900-1000 mm of precipitation falling in a single rainy season between April and October; which cause droughts and floods that frequently affect local production. According to local farmers, the situation has worsened since the 1980s, as early and late rains, which are very important for their agricultural activities, become less reliable. But local farmers do not only rely on rain-fed agriculture but also practise irrigation⁶. As traditional land-use patterns came increasingly under pressure and irrigation proved to be profitable⁷, the area under irrigation increased enormously. Since the 1990s, irrigable land, formerly lying idle, has become scarce. The

5 *Tindanas* are locally perceived as the successors of the settlers who first inhabited a certain portion of land. However, these claims are frequently contested, as settlement histories are challenged, and different claims about who is first comer and who is latecomer exist (e.g. Lentz 1998, 53-54, for the Upper West Region).

6 Irrigation techniques have been introduced in the area since colonial times. Government-driven irrigation proliferation in the district followed two paths: (1) the construction of small dams, (2) the construction of the Tono irrigation project. Additionally, small-scale farmers have expanded vegetable gardening, using groundwater along the dry riverbeds. Commercial vegetable cultivation with motorized pumps has spread along the river beds and waste water channels of the irrigation scheme.

7 But irrigation entails some risks. In 2003, large parts of the tomato crop were affected by disease, while in the dry season 2006/07 the crop rotted as tomato traders rather imported tomato from neighbouring Burkina Faso.

widespread dissemination and adoption of irrigation techniques has not only affected local patterns of production and livelihoods, but resulted in new ways in which access to land and water was managed, especially in the Tono irrigation project.

Land and water management within the Tono irrigation project

The Tono irrigation scheme was constructed between 1976 and 1986. When the construction of the Tono irrigation scheme was planned, the local paramount chief was approached by government representatives to coordinate the acquisition and the compensation procedures for the necessary land (Konings 1986: 270 ff.). Land in Northern Ghana, was state property and could be acquired by the government without compensation from colonial times up to the 1979 constitution – when land reverted back to unspecified former landowners. The latter created a large degree of tenure insecurity and litigation (Lund 2006: 77 ff.). Compensation had only to be paid for houses, crops and fruit trees. The forceful expropriation of land proved to be a traumatic experience to those, who lost their farms and homesteads. However, according to local elders, the expropriation did not create a great deal of local opposition, as people were wary of the ruling military regime and felt that the (Tono) construction might bring some beneficial development, as the construction was supervised by white engineers (Laube 2007: 91-92). Although entitled to compensation for buildings and fruit trees, small-scale farmers were hardly compensated and the local paramount chief allegedly never redistributed the funds given to him for the compensation of farmers and land holders.

After the construction of the irrigation scheme had been completed, expropriated lands were only partially redistributed amongst the local small-scale farmers. Most were given to state farms, military officers and members of local, regional and even national political, administrative and economic elites. Soon afterwards, when farming by absent commercial farmers proved unprofitable and parts of the irrigable land lay fallow, the project management decided to involve small-scale farmers. Farmers, who were initially dispossessed, were to be favoured in land allocation. But as many of them were lacking capital for irrigation farming and others were reluctant to cooperate with the project management, only few plots were allocated to the original owners. Instead, young and adventurous farmers, who had gathered experience as farm boys on commercial farms, took over vacant plots.

The project management proved to be incapable of effectively controlling hundreds of small-scale farmers and organising the collection of irrigation fees as well as the repayment of input loans. Therefore, Village Commit-

tees (VCs)⁸ were established in 1987. Since then, parts of the project land have been allocated to the VCs that represent the nine villages surrounding the scheme. The remaining land has been directly allocated by the project management of the parastatal irrigation company ICOUR, which has replaced the expatriate project management that had initially run the project.

The village committees consist of all irrigation farmers of one village and are headed by an executive. The executives have to oversee land and water allocation within the project zones allocated to the VCs, collect payments, and inform the local communities about current irrigation policies and schedules.

Although large parts of the project area are now managed by the VCs, the irrigation company still sees itself as the owner of all the project land.⁹ However, many of the original landowners, who were never adequately compensated, maintain that the lands are theirs, and that they should be either compensated or the lands should revert back to them. Land claims of original landowners are a constant source of conflicts as irrigable land has become scarce and some of the original landholders only have access to smaller and inferior plots.

The allocation of the land within the project is revised every five years by a committee, which is chaired by the head of the district administration. It consists of representatives of the project management, the Ministry of Food and Agriculture, and commercial and small-scale farmers. According to an assessment of maintenance activities, cultivation efficiency, and payment records, land is given to various VC's. Within the villages, the VC executive allocates plots to farmers, who in turn have to pay water levies according to the size of their plot and the crop they are cultivating. Land allocated to individual farmers can not be withdrawn, unless the farmer fails to pay his water levies or other inputs arising from the project. The project management allocates all land not controlled or allocated by the VCs.

Although the responsibilities and procedures for land allocation seem to be clearly defined, the interference of traditional and neo-traditional authorities, as well as a high degree of informal arrangements and rule deviance makes for a much more complex picture. The executive of the VCs, which should be democratically elected, is usually comprised of representatives of the various clans of a village and is headed by a representative of the *tin-dana's* lineage. The selection is based on negotiation processes between local chiefs and opinion leaders. While this is an interesting adaptation of local

8 The idea of involving Village Committees in the management of the irrigation project was also the result of the retrenchment programmes that followed the SAPs, during which the project management lost more than half of its staff.

9 The project management claims that since 2002, 80% of the land was under control of VC's.

tradition to the formal project structure, in fact, it often turns out to be flawed with regard to the effectiveness and the accountability of local resource management. Social origins rather than merits, and selection rather than election, qualify VC executive members in the perspective of local decision makers. The result is that members of the VC executive not only lack the competence and administrative skills they need, but also represent the particular interest of local factions. As land issues frequently become an arena for local disputes – original landholders compete with those who acquired land at an earlier phase, and local clans blame each other for trying to monopolize scarce resources – the efficiency of VCs is often compromised. Decision making becomes non-transparent and causes further conflicts. The legitimacy of and respect for the VC executives' decisions are also undermined by local chiefs – who are local authorities acknowledged by the government but with little traditional legitimacy in the local community¹⁰. They tend to bypass the VCs in favour of themselves and their clientele. This happens with the project managements' approval, because the irrigation company frequently depends on the chiefs to control or bill farmers. But even the VC executives themselves don't always abide by the formal rules in place. Members of the VC executive are known to allocate lands to outsiders paying bribes, and this practice diminishes the VC executives' legitimacy and the respect for its decisions.

As all irrigable plots have been allocated but not all lands within the project area have been developed, the areas that have been left undeveloped – because of low fertility, topography, drainage and environmental protection – are increasingly put under pressure. In the developed areas, the farmers' dependence on irrigation water provided by the company makes it difficult for them to directly contest the land ownership of the irrigation company. But in the undeveloped areas, *tindanas* and original landholders have, to the resentment of the project management, started to allocate land. The project management tries to protect ecological buffer zones but usually finds it difficult to stop farmers from encroachment. Plots along the wastewater channels, left undeveloped for environmental reasons, are highly fertile, provide easy access to wastewater, and are under high demand. Mostly commercial farmers, with the necessary capital to run pumps, encroach upon these areas. They are usually well connected with local politicians and have close (business) relations to the project administration. Thus, their activities are rarely stopped. Encroaching small-scale farmers, who often illegally extend

¹⁰ Chieftaincy is an institution that had not been strongly developed in the formerly rather acephalous societies in this part of Northern Ghana, although locally chiefs and big men may well have dominated local arenas in certain areas (Der 2001: 57). During the reign of the British, the institution was strengthened and further propagated after independence (Laube 2007: 54-55).

irrigation channels to draw water into the protection zones, are frequently supported by chiefs, who give their backing to satisfy their clientele.

In the zones under ICOUR management, land allocation procedures also do not follow clear cut rules. Large amounts of land are allocated to politicians, members of the administration, project personnel and a number of commercial farmers who have established business relationships with the project management. Within the areas managed by the irrigation bureaucracy, only few small-scale farmers with good relationships to project management get access to plots. The fact that allocation practices are based on patronage, nepotism as well as corruption is visible to all farmers and severely undermines the legitimacy and enforcement power of the project management (Laube 2007: 316-317).

Looking at the land allocation procedures within the Tono irrigation project a complex setting unfolds. Formal and informal rules and various actors are involved in the allocation of land and the disputes that go along with it. Various actors invoke various formal as well as informal institutions, but may breach the same set of rules, while they compete for power and competencies. It is not only the project management and the VCs that allocate project land, but also politicians, commercial farmers and chiefs. *Tindanas* as well as original landholders do so in formerly undeveloped areas. Legal pluralism visible in 'forum shopping' and 'shopping forums' is paralleled by a deeply engrained contempt for rules and regulations. However, 'triangles of accumulation' (Migdal, 1989: 238 ff) between commercial farmers, project managers, local administrators and politicians allow local elites to gain preferential access to water and land.

Water allocation is less complex than land allocation, but it is characterized by a similar lack of institutional legitimacy and enforceability. Nevertheless, ownership of water is uncontested. Because the dam of the project has been constructed by the government, most informants agree that the water belongs to the irrigation company.

The irrigation company collects water levies according to the plot sizes and the crops cultivated. Water engineers are responsible for the irrigation schedules of the project and water bailiffs serve all zones and laterals with water at fixed intervals according to these schedules. The water bailiffs oversee chief irrigators (trained small-scale farmers) who are responsible for the allocation of water within lateral canals. The fields at the tail end of the lateral are supposed to be irrigated first, while the other farms will be successively irrigated until the plots at the mouth have received water.

However, chief irrigators lack the power to effectively supervise water allocation within the lateral canals. Small-scale and commercial farmers irrigate their farms as they see fit and disputes over water allocation frequently arise. If farmers need water when it is not the turn of their farming area, they

frequently break the lock at the valve of their lateral canal and channel water to their plots. This practice should be fined, but sanctions are rarely imposed.

Commercial farmers and project personnel can easily influence the water bailiffs to channel additional water to their plots. They farm together and are colleagues. Water bailiffs also accept bribes for extra services. Self-interest, disrespect for institutions, and the lack of sanctions is extending so far that project personnel has been observed destroying project infrastructure in order to direct water to their own farms or plots of farming friends. Water allocation within the project has not been affected by national water reform processes; most farmers and parts of the project management are not aware of the WRC and its regulations.

This short description of natural resource management within the Tono irrigation project shows how the control of natural resources remains contested even in a clearly defined area where the Ghanaian government has formally established control over land and water. In disputes and negotiations over resources, various actors invoke different sets of official and/or local rules to pursue their individual benefits. The acknowledgement of the overall legitimacy and enforceability of rules and regulations is low, and rule deviances as well as administrative malpractices make for an institutional setting, in which the self-interest of actors accounts for many resource management decisions. The lack of accepted legitimacy of institutions and poor enforceability of rules, as well as the fact that actors well-endowed with social, economic and political capital are able to manipulate and circumvent institutions most effectively, compromise the equity, economic efficiency and environmental sustainability of the overall project.

Conclusions

This article has argued that water reforms in Ghana have followed neo-liberal development trajectories that are largely promoted by international donor organisations. In the course of these reforms, the need to develop a supervisory body for the water sector evolved because potential investors required security for their investments in the water sector. What followed was the enactment of a new water law that reflected the IWRM paradigm, created the WRC and vested all water rights in the state. However, despite relentless efforts by the WRC, the impact of the new legislation on the ground is minute, and old water rights continue to exist *de facto*. Lacking the political will to implement the new water law, the government has allocated only few resources to the WRC, which is therefore unable to implement the new legislation comprehensively. The weakness of the WRC has two consequences. First, the WRC lacks the ability and funds to organise the imple-

mentation of the new legislation at the local level. Secondly, it lacks the power to interfere with decisions of high political and economic importance.

At the local level, the WRC depends on DAs and chiefs to implement its regulations, and the straightforward implementation of regulations seems to be difficult. As the example of the Tono irrigation scheme has shown, multiple institutions and actors are involved in the management of natural resources. Various actors have overlapping and conflicting responsibilities and interests. They are engaged in continuing negotiations and contestations over the access to irrigated land and water resources. Within this process/these processes, different institutional frameworks, such as national laws and policies, project rules and regulations as well as local norms and values are used as reference points for argumentation but not necessarily as guidelines for action. Institutional complexity is further increased by a fundamental lack of irrefutable institutional legitimacy, enforcement power and rule compliance. Corruption, nepotism and political patronage are facets of weak local government structures that often influence resource management more than formal rules. While legal pluralism may be an impediment to the implementation of water reforms, local power structures entail the danger of elite capture of resources and the exclusion of less powerful and underprivileged parts of the local society. Given the vested interest that actors – not only in Northern Ghana – hold in natural resources, it seems unlikely that the DAs will be able to implement water reforms in a transparent, accountable and equitable manner under the present regime.

This problem is exacerbated by the fact that the water use registration procedures envisioned pose a disincentive for small-scale water users to cooperate. They might rather arouse suspicion, as water users could fear registration to be a threat to their livelihoods and business activities. The cost of registration as well as the lack of the ability to influence decision making in the water sector can easily lead to the withdrawal and/or the resistance of local water users. The failure to get them involved in the reform process, might also open up the risk of their exclusion from the access to vital water resources and create new inequalities and conflicts as, for instance, experienced during land titling exercises in Ghana (Kasanga 2001).

At the national level similar problems exist. The WRC lacks the power to enforce the new water laws against the vested economic and political interest of powerful groups. Examples of the Bui dam and from the mining sector cited above have shown that the WRC can be largely ignored, when it comes to important issues in the water sector. This raises the suspicion that the WRC's deprivation of sufficient resources is politically intended, as it allows the government to continue to independently make important water resource management decisions. This is problematic because in the face of increasing water demand and dwindling resources important decisions about the allocation of water resources lie ahead. Such decisions could have not

only significant economic consequences but touch upon crucial regional interests (e.g. Northern agricultural livelihoods vs. Southern domestic and industrial power demand) and social issues (e.g. rural poor vs. urban middle-class). If such decisions are taken without the consent of water users, but based only on political considerations and the economic interest of powerful interest groups, they could have considerable social impact and large conflictive potential. Therefore, a strong and independent regulatory body, able to effectively negotiate various interests in order to prevent socially unacceptable resource allocation and conflicts, is needed.

Ghanaian water reforms have promised to establish a framework for the ecologically sustainable, socially equitable, and economically efficient management of the country's water resources. However, it seems that the reforms have mainly served to promote general neo-liberal policies, without bringing about the specific objectives envisaged. As the implementation of the reforms is hindered at the national level and left to local authorities at the district level, the promises are not kept. This creates serious social as well as ecological perils. Poor, powerless and less well-connected actors may be denied access to vital resources while the resources might be overused and polluted.

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Zusammenfassung

Im Jahr 1996 hat die ghanaische Regierung im Zuge von Privatisierungsvorhaben im Trinkwasserbereich eine weitgehende Wassersektorreform eingeleitet. Die Wasserressourcen des Landes unterstehen nun offiziell der Kontrolle der *Water Resources Commission (WRC)*, die ein integriertes Wasserressourcenmanagement (*IWRM*) propagiert und für eine effiziente, nachhaltige und gerechte Wassernutzung sorgen soll. Am Beispiel eines Bewässerungsgebietes in Nordghana wird gezeigt, welche Schwierigkeiten bei der lokalen Umsetzung der Wasserreform zu erwarten sind. Angesichts der lokalen politischen Verhältnisse, die durch Rechtspluralismus und schwache Regierungsstrukturen gekennzeichnet sind, stellt sich die Frage, wie die mit nur geringen Ressourcen ausgestattete WRC ihre Reformpläne lokal umsetzen kann. Da die neue Behörde auch auf nationaler Ebene nicht in der Lage ist, wichtige Entscheidungen im Wassersektor zu beeinflussen, besteht die Gefahr, dass die Reform von sowohl lokalen als auch nationalen einflussreichen Interessengruppen dazu genutzt wird, die Durchsetzung von Partikularinteressen zu legitimieren und zugleich andere von der Nutzung der Wasserressourcen auszuschließen sowie ökologische Belange zu vernachlässigen.

Schlüsselwörter

Wasserreform, kommunale Verwaltung, Landbesitz, Wasser, Bewässerung, Ghana

Résumé

Le gouvernement ghanéen a lancé en 1996 une large réforme du secteur de l'eau à la suite de projets de privatisation dans le domaine de l'eau potable. Les ressources en eau du pays sont donc maintenant soumises officiellement au contrôle de la Water Resources Commission (WRC) qui préconise une gestion intégrée des ressources en eau (IWRM) et doit garantir une utilisation de l'eau efficace, durable et plus juste. A partir de l'exemple d'une zone d'irrigation dans le nord du Ghana, les difficultés liées à l'application locale de la réforme de l'eau sont mises en évidence. La situation politique locale étant caractérisée par un pluralisme juridique et de faibles structures gouvernementales, une question s'impose: comment la WRC va-t-elle pouvoir implanter ses réformes au niveau local, alors qu'elle ne dispose que de peu de moyens? Cette nouvelle institution n'est également pas en mesure d'influencer les décisions importantes prises dans le domaine de l'eau au niveau national. Il est donc fort à craindre que la réforme, aussi bien au niveau local que national, va être le jeu d'influents groupes de pression qui vont s'en servir pour légitimer leurs intérêts particuliers, tandis que d'autres n'auront pas accès aux ressources en eau et que les questions écologiques ne seront pas prises en compte.

Mots clés

réforme de l'eau, Etat et administration locale, propriété foncière et occupation des sols, irrigation, Ghana

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